



WILLIAMS SOUND®
HELPING PEOPLE HEAR

INSTALLATION GUIDE & USER MANUAL

Powered Speaker

Model SPK 024

RoHS

POWERED SPEAKER

Model SPK 024

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Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

Statement for compliance to “RSS-Gen Issue 2 June 2007” for Industry Canada:

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

SYSTEM OVERVIEW

Thank you for purchasing the SPK 024 powered speaker from Williams Sound.

The SPK 024 is versatile! In addition to the optional wireless FM input SLD 072, the SPK 024 features a 1/4" mic jack and line-level input (RCA) jack, all of which can be controlled simultaneously by the front mounted master volume and tone control knobs, and individually by dedicated and independent volume controls.

The SPK 024 supports two optional independent receiver modules for two channel applications. The internal mixer combines sound sources flawlessly, and the line-level output provides a simple connection to recording devices and other sound systems.

The SPK 024 can be set on a flat surface, threaded on a mic stand, or wall mounted for permanent installation. Auto/on/off power circuitry ensures that the unit will not be left on accidentally.

CAUTIONS AND SAFETY INSTRUCTIONS

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



WARNING: SHOCK HAZARD-DO NOT OPEN.

AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION:

This powered speaker should be used with either 110-125VAC / 210-240VAC - 50Hz/60Hz only. DO NOT use any other power source.

Electrical energy can perform many useful functions. But improper use can result in potential electrical shock or fire hazards. This product has been engineered and manufactured to assure your personal safety. In order not to defeat the built-in safeguards, observe the following basic rules for its installation, use and servicing.

ATTENTION:

Follow and obey all warnings and instructions marked on your speaker and its operating instructions. For safety, please read all the safety and operating instructions before you operate this speaker and keep this booklet for future reference.

INSTALLATION

- Polarization** - Your speaker is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- Power Sources** - Operate your speaker only from the type of power indicated at the voltage selector switch on the rear panel. If you are not sure of the type of power supply at your site, consult with the local power company.
- Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electrical shock.
- Power Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs or convenience receptacles.
- Ventilation** - A metal heatsink is provided for heat dissipation. To ensure reliable operation of the speaker and to protect it from overheating, this heatsink must not be blocked or covered. Do not place this speaker in a built-in installation such as a bookcase or rack unless proper ventilation is provided.
- Wall Mounting** - Mount this speaker to the wall or stand only as recommended by the manufacturer.

CAUTION:

THIS PRODUCT IS DESIGNED TO AMPLIFY SOUNDS TO A HIGH VOLUME LEVEL. TO PROTECT YOUR HEARING AND THE HEARING OF OTHERS: MAKE SURE THE VOLUME IS TURNED DOWN BEFORE TURNING THE SYSTEM ON, THEN ADJUST TO A COMFORTABLE LISTENING LEVEL. IF YOU EXPERIENCE FEEDBACK (A SQUEALING OR HOWLING SOUND), REDUCE THE VOLUME AND MOVE THE MICROPHONE AWAY FROM THE SPEAKER. DO NOT ALLOW CHILDREN OR OTHER UNAUTHORIZED PERSONS TO HAVE ACCESS TO THIS PRODUCT.

USE

- Accessories** - To avoid personal injury:
 - Do not place this speaker on an unstable cart, stand, tripod, bracket, or table. It may fall, causing serious injury and serious damage to the speaker.
 - Use only with a cart, stand, tripod, bracket or table recommended for this purpose or included by the manufacturer. When using the included bracket, follow the manufacturer's instructions for mounting the speaker.
- Wall or Ceiling Mount** - The product should be mounted to the wall or ceiling only as recommended by the manufacturer.
- Speaker and Cart Combination** - A speaker and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the speaker and cart combination to overturn.
- Water and Moisture** - Do not use this speaker near or in water or in an extremely moist environment.
- Cleaning** - Unplug the speaker from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- Heat** - Situate the speaker away from heat sources such as radiators, heat registers or other heat producing items.
- Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- Replacement Parts** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a) When the power-supply cord or plug is damaged,
 - b) If liquid has been spilled, or objects have fallen into the product,
 - c) If the product has been exposed to rain or water,
 - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,
 - e) If the product has been dropped or damaged in any way, and
 - f) When the product exhibits a distinct change in performance - this indicates a need for service.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

SPK 024 FEATURES AND CONTROLS

SPK 024 POWERED SPEAKER FEATURES

1. **MASTER VOLUME CONTROL** - controls the overall volume of the SPK 024 as well as the LINE OUT (11) connector.
2. **TONE** - this is a variable frequency high-cut tone control that is primarily used to reduce high frequency feedback. The control is essentially flat when turned fully clockwise and reduces more high frequencies as it is rotated counterclockwise.
3. **LED** - displays the power state of the speaker. See A2 for details.
4. **MIC INPUT** - plug a wired dynamic microphone in here. This 1/4 inch jack is designed to accept a low impedance microphone. The input volume is controlled by the MICROPHONE LEVEL knob (6). This input does not supply phantom power.
5. **OFF/AUTO/ON** switch - this controls the power for the speaker after the MASTER AC SWITCH (10) is placed in the ON position. The speaker is essentially OFF with this switch in the OFF position. The front panel LED (3) will glow Red. The speaker will come ON from its standby mode automatically when any audio signal is sensed when the switch is in the AUTO position. The LED (3) will turn from Red to Green. 10 minutes after all audio stops the speaker will return to its standby mode and the LED (3) will return to Red. The speaker is ON at all times when the switch is in the ON position. The LED (3) will glow Green.
6. **MIC LEVEL** - this knob controls the input volume of the microphone plugged into the MIC INPUT (4). It is always good practice to leave the control turned all the way down (full counterclockwise) when no microphone is being used.
7. **LINE LEVEL** - this knob controls the input volume of anything plugged into the LINE IN (8) jack.
8. **LINE IN** - this mono RCA jack is designed to accept audio from devices such as CD players, video tape players or anything else with a line-level audio output. The input volume is controlled by the LINE LEVEL knob (7).
9. **LINE OUT** - this mono RCA jack provides line-level audio to drive additional speakers or other audio devices with a line-level input. The level is controlled by the MASTER VOLUME CONTROL (1) on the front panel. If this output is used to drive the LINE IN (8) of a second SPK 024, the MASTER VOLUME CONTROL (1) will control the overall volume of both speakers.
10. **MASTER AC SWITCH** - controls overall power to SPK 024 speaker.
11. **AC JACK** - this is where the removable AC plug is attached to the speaker. The AC plug is polarized and will only attach one way.
12. **AC FUSE** - the replaceable AC fuse is housed here. Follow the marking on the panel for proper replacement if needed (0.5A for 210-240VAC use or 1.0A for 110-125VAC use).
13. **AC VOLTAGE SELECTOR** - set down when used with 110-125VAC (US and other areas) and up when used with 210-240VAC (Europe and other areas). Be sure to check your local voltage before adjusting the selector. The speaker is shipped from the factory set in the 110-125VAC position and with a cable designed for that voltage. *Note: The supplied AC cable is to be used for 110-125VAC only.*

FIG. A1: SPK 024 REAR VIEW

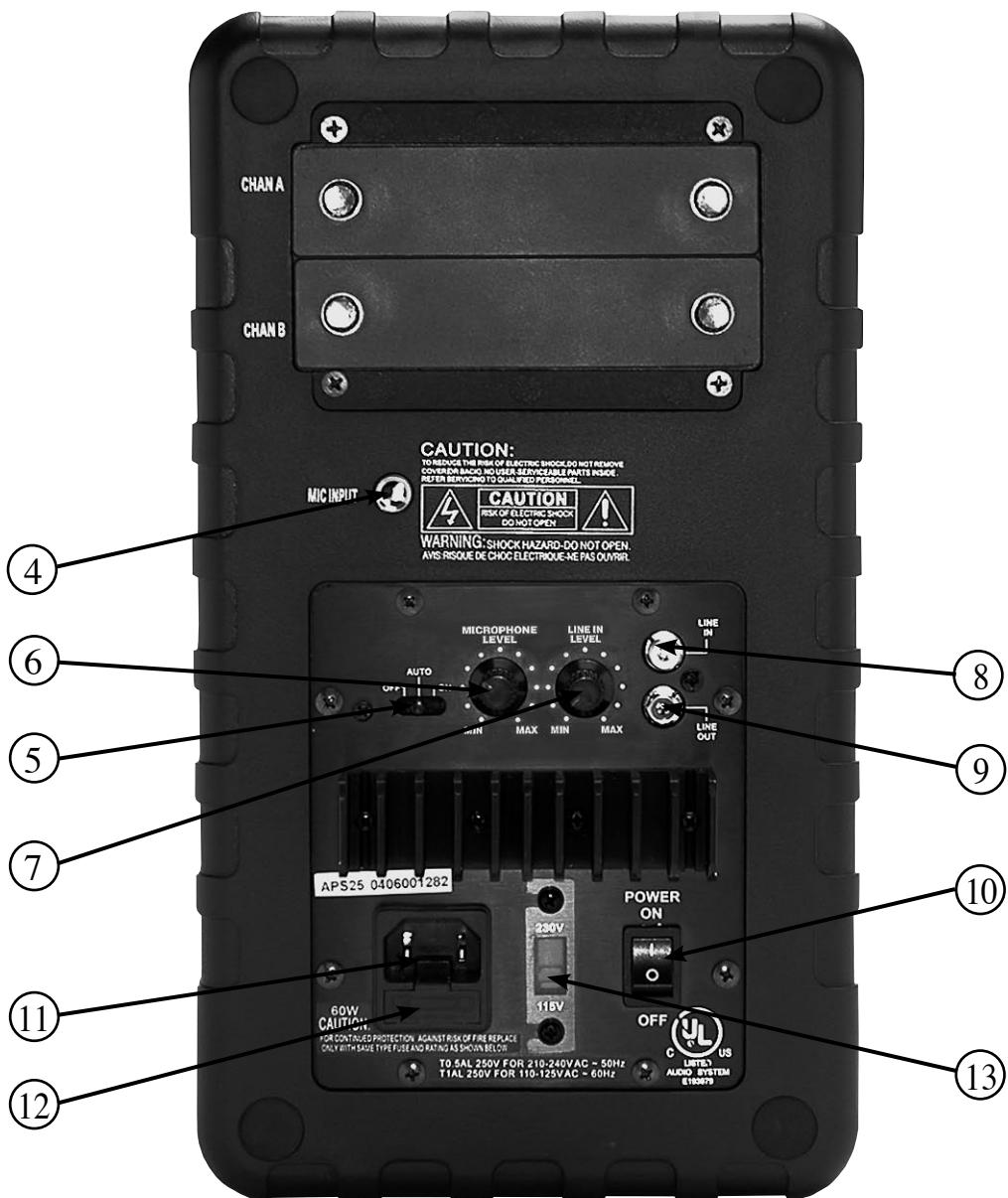


FIG. A2: SPK 024 FRONT VIEW



USING THE SPK 024 POWERED SPEAKER

SELECT A LOCATION

The SPK 024 can be placed on a table top, shelf or other flat surface in the listening area; or it can be threaded on to a microphone stand or mounted on a wall or ceiling (see mounting options, page 7). A power outlet should be accessible and enough space should be available to run wiring from the audio source to the speaker.

CONNECT THE POWER

Select the desired power voltage. Slide the VOLTAGE SELECTOR (see 13, FIG. A) DOWN for 110-125VAC and UP for 210-240VAC. Plug the AC power cord into an AC outlet and press the "POWER ON" switch to the ON position. The "Φ" power on LED on the front of the unit will illuminate RED to indicate standby mode.

Note: The supplied AC cable is to be used for 110-125VAC only. A standard European plug/cable should be used for the 210-240VAC configuration and should be rated minimum 240V, 5A.

SPEAKER POWER:

Slide the OFF/AUTO/ON switch (see 5, FIG. A) to the "ON" position to turn the speaker on (speaker stays on all the time). Or, slide the OFF/AUTO/ON switch to the "AUTO" position to have the speaker turn on only when it detects an audio signal. The "Φ" power on LED on the front of the unit will illuminate GREEN when an audio source is present.

CHOOSE AN AUDIO SOURCE

Option 1: MIC INPUT

Plug in a dynamic microphone into the 1/4" "MIC INPUT" jack on the back of the speaker. Note: The SPK 024 DOES NOT supply phantom power for Electret microphones.

Adjust the Microphone Level: First, make sure the master volume control on the front of the SPK 024 is at least 1/4 from max volume. Then rotate the MICROPHONE LEVEL control clockwise until you hear the broadcast clearly. If the audio input is too low, it will sound noisy. If the input is too high, it will sound distorted.

Option 2: LINE LEVEL INPUT

Plug in a CD player, tape player, or other audio source into the LINE IN RCA jack on the back of the speaker.

Adjust the Line In Level: First, make sure the master volume control on the front of the SPK 024 is at least 1/4 from max volume. Then rotate the LINE IN LEVEL control clockwise until you hear the broadcast clearly. If the audio input is too low, it will sound noisy. If the input is too high, it will sound distorted.

ADJUST MASTER VOLUME

Rotate the VOLUME control on the front of the SPK 024 until the audio is projecting at a comfortable listening level.

ADJUST TONE

Rotate the TONE control on the front of the SPK 024 fully clockwise for a flat frequency response. Rotate the TONE control fully counterclockwise to cut off the high frequencies.

MOUNTING OPTIONS FOR THE SPK 024 FM POWERED SPEAKER

WALL MOUNTING

The SPK 024 is supplied with a wall mounting bracket. It can be attached to the speaker via the built-in 1/4" x 20 threaded holes on the top and bottom of the speaker using the included large screws.

Supplied rubber pads can be applied to the inside surface of the bracket to protect the speaker surface from scratching and reduce the possibility of the speaker rotating in the bracket. The bracket can be attached to the desired surface using a number of different fasteners. Be sure to use fasteners that are appropriate for the surface you are mounting to and that can support the speaker's weight. Once the desired position is achieved, tighten the screws securely.

STAND MOUNTING

The SPK 024 has two industry-standard 5/8" x 27 threaded inserts molded into the cabinet - one on the bottom and one on the side. These allow the speaker to be securely mounted to a stand (such as a microphone stand). Be sure to tighten the speaker securely to the stand. Also, be sure that the stand can support the weight of the speaker and that it will be stable with that weight attached.

FLAT SURFACE

Four self-adhesive anti-skid pads can be applied to the bottom or side of the speaker to help stop it from moving when placed on a flat surface.

RECYCLING INSTRUCTIONS



Help Williams Sound protect the environment! Please take the time to dispose of your equipment properly.



Product Recycling Instructions:

Please do NOT dispose of your Williams Sound equipment in the household trash. Please take the equipment to an electronics recycling center; OR return the product to the factory for proper disposal.

LIMITED WARRANTY

Williams Sound products are engineered, designed, and manufactured under carefully controlled conditions to provide you with many years of reliable service. Williams Sound warrants the SPK 024 against defects in materials and workmanship for TWO (2) years. During the first two years from the purchase date, we will promptly repair or replace the SPK 024.

Microphones, earphones, headphones, batteries, cables, antennas, carry cases, and all other accessory products carry a 90-day warranty. Chargers carry a 1 year warranty.

WILLIAMS SOUND HAS NO CONTROL OVER THE CONDITIONS UNDER WHICH THIS PRODUCT IS USED. WILLIAMS SOUND, THEREFORE, DISCLAIMS ALL WARRANTIES NOT SET FORTH ABOVE, BOTH EXPRESS AND IMPLIED, WITH RESPECT TO THE SPK 024, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WILLIAMS SOUND SHALL NOT BE LIABLE TO ANY PERSON OR ENTITY FOR ANY MEDICAL EXPENSES OR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY ANY USE, DEFECT, FAILURE OR MALFUNCTIONING OF THE PRODUCT, WHETHER A CLAIM FOR SUCH DAMAGES IS BASED UPON WARRANTY, CONTRACT, TORT OR OTHERWISE. THE SOLE REMEDY FOR ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT IS REPLACEMENT OF THE PRODUCT. NO PERSON HAS ANY AUTHORITY TO BIND WILLIAMS SOUND TO ANY REPRESENTATION OR WARRANTY WITH RESPECT TO THE SPK 024. UNAUTHORIZED REPAIRS OR MODIFICATIONS WILL VOID THE WARRANTY.

The exclusions and limitations set out above are not intended to, and should not be construed so as to contravene mandatory provisions of applicable law. If any part or term of this Disclaimer of Warranty is held to be illegal, unenforceable, or in conflict with applicable law by a court of competent jurisdiction, the validity of the remaining portions of this Disclaimer of Warranty shall not be affected, and all rights and obligations shall be construed and enforced as if this Limited Warranty did not contain the particular part or term held to be invalid.

If you experience difficulty with your system, call for customer assistance:

1-800-843-3544 (U.S.) or +1-952-943-2252 (Outside the U.S.)

If it is necessary to return the system for service, your Customer Service Representative will give you a Return Authorization Number (RA) and shipping instructions.

Pack the system carefully and send it to:

**Williams Sound
Attn: Repair Dept.
10300 Valley View Rd.
Eden Prairie, MN 55344 U.S.A**

Your warranty becomes effective the date you purchase your system. Your returned warranty card is our way of knowing when your warranty begins. Please take a moment to fill out and mail the enclosed card. This information will help us serve you better in the future. Thank you!

SPK 024 SPECIFICATIONS

Dimensions:	12.4”H x 7.1”W x 7.5”D (315mm x 180mm x 190mm)
Color:	Black with white legends
Weight:	9.4lb (4.3kg) approx.
Rated Power:	20 watts continuous
Frequency Response:	65Hz – 7kHz
Max SPL @ rated output:	101dB @ 1 meter
Woofer:	5.25” (133.35mm) high efficiency magnetically shielded
Tweeter:	1” (25mm) dome
Crossover:	1st order passive @ 8kHz
Tone Control:	-6dB/octave sliding lowpass (3kHz to 8kHz)

Wired inputs/output

CHANNEL A, B:	Empty slots for optional receiver sleds SLD 072
Mic:	-81dBV (0.089mVRMS) for 1 watt 100KΩ unbalanced, 1/4 “ phone jack, variable
Line:	-40dBV (10mVRMS) for 1 watt 10KΩ unbalanced, RCA jack, variable
Line-Out:	+15dBV max - RCA jack
AC Power Requirements:	User switchable 110-125 / 210-240VAC - 50Hz / 60Hz
Approvals:	UL, C-UL, RoHS, WEEE
Included w/speaker:	Removable wall-mount bracket with 2 screws and rubber anti-rotate pads, removable right-angle AC cord, 4 self-adhesive anti-skid pads, 4 module screws

Note: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE!



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